The Study of Resilience within Rural General Practitioners

Patricia Aitken (B.A)

School of Psychology
University of Tasmania

A report submitted as a partial requirement for the degree of Bachelor of Science with Honours in Psychology at the University of Tasmania, 2009.

I declare that this report is my own original work, and that contributions of others have been duly acknowledged.

_____

Patricia Aitken
October, 2009.

Acknowledgements

My sincerest thanks to my Supervisor and Mentor, Dr Ali Maginness, for providing inspiration and energy throughout this challenging and rewarding study.

Special thanks is given to the ten General Practitioners who took part in the study and the five GP mentors who participated in the nomination process. Your generosity and enthusiastic support for the study was exceptional.

My thanks to the Psychology Lecturers and Administration Staff at Launceston and Hobart Campuses for their generous assistance and advice with navigating the system, and to my sisters in Honours in Launceston, your friendship and support has made the year a memorable one.

My love and heartfelt thanks to my partner Mark and our wonderful children, Kane, Lauren, Luke, Dan, Jess, Rowan, Bek, Ingrid and Ellanor, for your love, support and encouragement throughout the year.

This study was kindly supported by General Practice North West Tasmania.

Table of Contents

Title Page and Declaration i

Acknowledgments ii

Appendices v

List of Tables and Figures vi

Abstract 1

Introduction 2

The Challenges of Rural General Practice . . . 2

General Practice in rural and remote North West Tasmania . 2

Research into rural workforce issues 3

The Research Aim 3

Resilience

Resilience defined 4

Resilience research 4

Models of Resilience

Resilience and Positive Psychology . . . 5

Resilience and Personality 5

Resilience and Mindfulness 6

The Study

Qualitative Research 7

Phenomenological Psychological Research . . . 8

Method

Participants 9

Materials including Self-report Psychological Scales . 9

Design 11

Procedure and Data Collection 11

Data Analysis and Qualitative Analysis . . . 12

Results

GP Model of Resilience 15

Domains of Functioning 16

Belief Systems 16

Pro-active Behaviour 18

Personality Attributes 20

Connectedness 23

Positive Affect 26

Psychological Scale Results 29

Discussion

Resilience 31

Resilience and Positive Psychology 31

Domains of functioning

1 - Positive Beliefs 32

2 - Pro-active Behaviours 34

3 - Personality Attributes 35

4 - Connectedness 36

5 - Positive Affect 36

Positivity 39

Implications of the Research 41

Limitations 43

Future Research 43

Conclusion 44

References 45

Appendices

A. Letter to nominated GPs from GP Mentors . . 54

B. Interview Schedule 56

C. Information Sheet 58

D. Consent Form 61

Appendices cont...

E. Ethics Approval Letter 63

F. Psychological Scales 64

G. General Practice North West - Letter of Support . . 69

H. NVivo First Analysis of Themes 71

I. Matrix of Themes 72

J. Tables of Participant Quotes by Pyschological Structure . 73

Tables

Table 1 *Five Domains of GP Resilience and Associated Themes* 16

Table 2 *Means and Standard Deviations for GPs on the Five Facet Mindfulness Scale compared with Established Population Samples* 30

Figures

Figure 1. GP Model of Resilience 15

Abstract

Australia is facing a dilemma with regard to sustaining a rural General Practitioner workforce. The higher workloads and longer hours associated with rural practice, combined with less hospital and specialist support in comparison to urban settings, discourage medical graduates from taking up rural practice. In order to gain an understanding of what contributes to the successful rural doctor experience, the present study explored the subjective experience of ten General Practitioners in rural North West Tasmania who have been peer-nominated as functioning in a resilient manner. The research investigated psychological wellbeing and wellness promotion practices through a mixed methodology of phenomenological qualitative research and psychological measures. The quantitative results conveyed that the participants were as resilient and mindful as the general population, with the qualitative data revealing a model of resilience incorporating the domains of positive belief systems, proactive behaviour, personality attributes, connectedness and positive affect. It was found that a superordinate paradigm of positivity provided a cohesive rationale for the complex interplay of positive attributes conveyed by all participants. Further research is suggested to explore the significance of positivity as a factor of resilience in rural medicine, particularly with regard to recruitment and retention of rural doctors.

Key words: general practitioners, rurality, resilience, mindfulness, positive psychology, positivity.

The National Rural General Practice Study (1997) conducted across four Australian states confirms that additional research on the future nature of the rural and remote medical workforce is needed. Numerous policy instruments used by the Commonwealth Government to entice undergraduates to choose rural practice have been tried and failed, including scholarships, greatly enhanced rural registrar payments, and the funding of rural health clubs (Rural Health Workforce Australia, 2008). Despite these incentives, it has been recognised that domestic graduates have demonstrated an extreme reluctance to work in the rural setting, and that merely increasing graduate numbers will not necessarily change this outcome. This reluctance may reflect the perception of medical graduates that rural general practice is considerably demanding and is unsupported by specialist and hospital services available in more urban settings (Health Workforce Resources, 2008).

There is foundation for this perception in that the average working hours of General Practitioners (GPs) increase progressively with rurality and remoteness (Health Workforce Queensland, 2006). GPs in the North West of Tasmania work in a region that has the State's highest ageing population, lowest socio economic status, and highest rurality. These factors, as well as lack of specialist and allied health support, affect recruitment and retention of doctors into rural areas. Recently, there has been increasing recognition from medical authorities that Australia is facing a dilemma with regard to sustaining a rural GP Workforce. It has been recognised that attention must be directed not only to industrial issues for rural doctors, but also to the social issues which directly affect a doctor's ability to practice (Rural Health Workforce Australia, 2008).

The majority of research conducted to investigate the issues affecting rural general practice, have focused on recruitment, retention, and training, with considerable information gathered about associated needs and barriers to remaining in rural practice. (Gardiner, Sexton, Kearns & Marshall, 2006; Hays, Veitch, Cheers, & Crossland, 1997). Research exploring health practitioner functioning has focused almost exclusively on workload and negative behavioural indices, including suicide, mental and physical illness, marital dysfunction, drug and alcohol use, burnout, and psychological distress (Holt & Del Mar, 2005; Weiner, Swain, Wolf & Gottlieb, 2001).

More recent health practitioner studies are researching the psychological factors that contribute to positive adaption in highly stressful occupations, through identifying psychological wellbeing, wellness-promotion practices and exploring the importance of building resilience amongst doctors (Gardiner, Sexton, Durbridge & Garrard, 2005; Jensen, Trollope-Kumar, Waters & Everson, 2008; Weiner, Swain, Wolf & Gottlieb, 2001). Through exploring the factors that contribute to successful human endeavour in the face of complex challenges and stressful environments, it is hoped that knowledge gained may be used to improve the rural experience for all doctors.

The purpose of this study is to explore the subjective experience of resilience in General Practitioners in rural North West Tasmania, as a result, there is no hypothesis proposed, however, the research aim is to investigate psychological wellbeing and identify wellness promotion practices of participants.

1. Resilience

The term resilience is often used to describe the attributes of a person who possesses stamina, is tough and hardy, or who demonstrates an ability to cope with problems and setbacks. Resilient people appear able to utilize their skills and strengths to cope and recover from problems and challenges, such as job loss, illness, or divorce. Less resilient individuals appear to be more easily overwhelmed by negative experiences, and as a result experience greater psychological distress (Centre for Confidence and Well-being, 2009). Current definitions of resilience propose that resilience is a construct representing positive adaption despite adversity, or good adaption under extenuating circumstances (Luthar, 2006; Luthar & Cicchetti, 2000; Masten & Reed, 2002; Snyder & Lopez, 2002).

Resilience has been researched for approximately fifty years, and has produced pioneering studies including the investigations of resilience in children of schizophrenics (Garmezy, 1974) and of Hawaiian infants (Werner, 2007; Werner, Bierman & French, 1971) who thrived despite their adverse environments. Adults studies of resilience have been limited, although several studies have identified factors that are related to adult resilience. These factors appear to provide a protective function under conditions of stress, and increase the likelihood of positive health outcomes (Luthar, 2006). Common attributes of resilient people have been shown to be sociability, self-efficacy, a sense of meaning, and a wide variety of recurrent positive emotions (Bromley, 2005; Cohn, Frederickson, Brown, Mikels & Conway, 2009; Hjemdal, Friborg, Stiles, Rosenvinge & Martinussen, 2006; Ong, Bergeman, Bisconti, & Wallace, 2006; Lyubomirsky, King & Diener, 2005; Tugade & Fredrickson, 2004). It is proposed that seeking to assess factors associated with

positive adjustment, healthy outcomes under adversity, and competence in core domains, will lead to a better understanding of resilience (Tedeschi & Kilmer, 2005).

Models of resilience have been offered from various fields of psychology. Positive psychology models of resilience focus on the process of being resilient in 'living well' as opposed to 'in the face of adversity', (Seligman & Csikszentmihalyi, 2000). Positive Psychology is a dynamic, relatively recent model of psychology that explores the positive features of human experience rather than the pathologies that have dominated psychology for so much of the past, with major therapy modalities based on principles of building competency rather than correcting defectiveness (Seligman & Csikszentmihalyi, 2000).

Positive psychology research has provided evidence for the existence of human strengths that contribute to resilience and exert protective influences against psychological distress, including the factors of: optimism, interpersonal skill, hope, perseverance, capacity to experience flow, sense of adventure, humor, self-efficacy, and self-esteem (Garmezy, 1983; Gilligan, 2000, as cited in Lemay & Ghazal, 2001; Seligman, 1992; Seligman & Csikszentmihalyi, 2000).

Additional models of resilience have emerged from the study of personality. Research has led to the development and validation of a set of global Big Five 'super traits' of personality (Brand & Egan, 1989; Goldman, 1990, as cited in Sinclair, 1992; McCrae & Costa, 1987). The Big-Five traits have been related to the expression of resilience in the individual, along with the associated personality attributes of humour, autonomy, self-esteem, positive social orientation, optimism,

sense of adventure, courage, self-understanding, a capacity to work hard, and an ability to endure and find outlets for emotions (Curtis & Cicchetti, 2003; Rutter, 1990; Seligman, 1992).

Research on the association between resilience and mindfulness examines the mechanisms by which the practice of mindfulness leads to beneficial outcomes, with empirical literature on the efficacy of mindfulness-based interventions increasingly showing that higher levels of mindfulness are related to fewer negative psychological symptoms (Baer, 2003; Baer, Smith, Lykins, Button, Krietemeyer, Sauer, Walsh, Duggan & Williams, 2008; Brown & Ryan, 2003; Langer & Moldoveanu, 2000). Definitions of mindfulness associate the construct with the nonjudgmental observation of the ongoing stream of internal and external stimuli as they arise, the present-centered attention to, and awareness of events and experiences, and the conscious attention to one's thoughts and feelings (Baer 2003; Brown & Ryan 2004).

Mindfulness widens perspective and can break the link between negative thoughts and negative emotions, with research revealing that mindfulness training changes brain function through the process of neuroplasticity. This change occurs as a result of reduction in activity in brain circuitry linked with negativity, and increases in areas linked with positivity. This process creates positive new thought habits and effectively rewires the brain (Begley, 2007, as cited in Fredrickson, 2009; Curtis & Nelson, 2003, as cited in Luthar, 2006).

Mindfulness has also been associated with the enhancement of well-being through positive human functioning, including optimism, focused self-attention, present-oriented curiosity, openness and acceptance of experience, acting with awareness, and acceptance (Bishop, Lau, Shapiro, Carlson, Anderson, Carmody, Segal, Abbey, Speca, Velting & Devins, (2004); Brown & Ryan, 2004; Fredrickson, 2009; Hayes & Shenk, 2004; Ryan & Deci, 2000). Insight into the factors that contribute to mindfulness may increase understanding of the specific skills that mindfulness cultivates and how these skills may relate to psychological adjustment (Baer et al., 2008).

The Study

The aim of this study is to explore the subjective experience of General Practitioners in rural North West Tasmania who have been identified as functioning in a resilient manner. The study seeks to identify psychological well-being, and wellness promotion practices, that may be assisting this group to function well in the rural setting. For the purpose of this study 'resilience' is defined as 'the capacity to respond to adverse conditions in a healthy manner'. The exploratory nature of this study will contribute to existing research data into the nature of resilience, and will form part of a research program examining resilience in the rural setting.

Qualitative Research

The study utilised a qualitative research approach with a component of quantitative enquiry through the use of psychological scales. Psychological qualitative research uses words rather than numbers to explore, describe and at times interpret, the personal experiences of the individual (Smith, 2008). Through the

establishment of models of qualitative research such as phenomenological research, qualitative research can provide credible results (Miles & Huberman, 1994).

The benefit of qualitative study, in moving the field of resilience forward through exploration of groups not previously studied, is widely recognised in resilience literature (Luthar, 2006; Massey, Cameron, Ouelette & Fine, 2002; Ungar, 2003). The focus on describing processes in naturally occurring phenomena may provide critical direction for future quantitative studies to test hypotheses of resilience processes.

Phenomenological Psychological Research

The phenomenological research approach, created by Husserl (1859-1938), was utilised to conduct the research. This approach proposes that the individual is a conscious agent, whose experience must be studied from the first-person perspective (Miles & Huberman, 1994; Smith, 2008). This approach requires the setting aside (bracketing) of previous scientific theories, to secure descriptive access to the meanings of psychological life within a natural context. This approach analyses the complexities of meanings within the data for each participant on a case by case basis, through the use of reflection, and the gaining of insight as to what is essential to the psychological processes under investigation (Wertz, 2005). Research within the phenomenological attitude is discovery oriented rather than hypothesis proving or theory testing (Smith, 2008).

Method

Participants

The study recruited ten General Practitioners living in the North West of Tasmania. Participant selection followed the method of criterion (purposive) sampling which was achieved through a peer-nomination process. Five North West General Practitioner Mentors were asked to nominate GPs that they perceive to be functioning in a resilient manner in their activities as a rural GP. The GP Mentors are leaders in the GP community and have the benefit of familiarity with their colleagues. From the nomination process, good cross-referencing occurred with ten GPs receiving either three or four nominations out of five possible nominations. The nominated GPs who consented to participate, comprised six male and four female GPs from diverse nationalities, and from a range of towns throughout the North West Coast.

Materials

Materials utilised in conducting the study included the Interview Schedule (Appendix A), The Information Sheet (Appendix B), Consent Form (Appendix C), and a digital voice recorder. The interview was followed by the participants completing three self-report Psychological measures (Appendix D): The Connors Davidson Resilience Scale; the Depression Anxiety and Stress Scale; and the Five Facet Mindfulness Questionnaire.

Self-report psychological Scales

The Connors Davidson Resilience Scale (CD-RISC) is a brief, self-rated measure of resilience that has been found to demonstrate sound psychometric

properties with studies showing that higher levels of resilience correspond to lower levels of perceived stress vulnerability. Reliability for the scale has a Cronbach alpha of 0.89. Test–retest reliability was demonstrated to have a high level of agreement, with a correlation coefficient of 0.87. The scale has been found to have convergent validity with other measures of hardiness, and results from studies conducted to test the reliability and validity of the CD-RISC have shown resilience to be a quantifiable construct (Connor & Davidson, 2003).

The Depression, Anxiety and Stress Scale (Dass-21 short-form) was used to assess levels of these constructs in the participants. The reliabilities of the DASS-21 scales have been assessed as possessing adequate reliability with alpha coefficients of Depression 0.88; Anxiety 0.82; Stress 0.90, and the Total scale 0.93. Study findings indicate that the DASS-21 evidences good convergent and discriminant validity when compared with other validated measures of depression and anxiety. The normative data for the scale was based on a large sample broadly representative of the general adult population. The DASS-21 subscales can validly and reliably measure the dimensions of depression, anxiety, and stress (Henry & Crawford, 2005).

The Five Facet Mindfulness Scale (FFMQ) self-report questionnaire, used to assess level of mindfulness for participants in this study, has been empirically proven to provide adequate to good internal validity, with alpha coefficients at 0.75 to 0.91. The scale measures five general tendencies to be mindful in daily life including: observing, describing, acting with awareness, non-reactivity to inner experience, and non-judging of inner experience. This scale provides five separate scores and does not produce a total mindfulness rating. Individual facets of the FFMQ correlate

positively with openness to experience, emotional intelligence, and self compassion, and negatively with alexethymia, dissociation, and psychological distress (Baer et al., 2008). Scale reliability was assessed as adequate given its similarity to the Kentucky Mindfulness Inventory (personal communication with author of scale, Baer, 2009).

Design

A qualitative approach to investigating and understanding GP resilience was selected to explore well-being practices and positive contributors to GP functioning from an individual perspective. A semi-structured interview was conducted with each participant in order to elicit an experiential narrative of life as a rural GP. This process was followed by completion of quantitative psychological questionnaires. The use of combined methodologies may be advantageous to the research question, in that quantitative data can assist to confirm or refute findings gained from the qualitative approach.

Procedure and data collection

GPs who had received the highest number of nominations were sent a Research Pack consisting of a letter of invitation from the GP Mentors to participate in the study, a Participant Information Sheet and a Consent Form. Upon receipt of informed consent, the researcher established an interview schedule. Individual recorded interviews were conducted with the researcher in the form of a semi-structured interview, starting with the question “You have been identified as a resilient person. Tell me what you think it is about yourself that has led to you being described as resilient”. The interview explored the answers to this question with the intent of eliciting in-depth responses as to the unique experience of the participant.

The average interview was of 45 minutes duration. Following the interview, participants were asked to complete the three self-report psychological scales.

The themes identified within the ten participants transcripts were assessed as reaching satiation, in that all themes were present for all participants without emergence of new themes. Interrater reliability was established through the co-scoring of randomly selected transcripts by the Supervisor, at the commencement, central, and concluding stages of the interview schedule. A full copy of the interview transcript was sent to each participant with a request for feedback.

Data Analysis

The method used to evaluate the qualitative results was the validation method of 'triangulation' which seeks to endorse a particular theoretical outcome through the gathering of data through differing sources (Wengraf, 2001). Triangulation of data was conducted through the comparison between qualitative interview data, quantitative scale results, and between-case comparisons, supported by assessment of the researcher's reflective notes. This process evaluated the presence of coherent themes within the data. For this study, reliability and validity is oriented towards the analysis of the data being transparent, communicable and coherent (Silverstein, Auerbach & Levant, 2005).

Qualitative Analysis

Analyses of the transcript data utilised the NVivo qualitative computer software package which is designed to facilitate the management and evaluation of unstructured data. The phenomenological coding technique of Analytic

Transformation was adapted for this study (Miles & Huberman, 1994) which specifies five sequences of data analysis:

1 *Subsample Analysis*

The first sequence of analysis involved the reading of each printed transcript, with notations added to references of interest that pertained to aspects of functioning.

2 Individual Case Synopsis

The second sequence of analysis involved individual case synopsis via NVivo, with each transcript treated as a separate case. Brief paragraphs of text were selected within each transcript, with this process enabling the assembly of data into three elements of behavioural, cognitive or emotional functioning.

3 Illustrated Narrative Themes

In the third analysis, the researcher re-orients their view of each case by referring to the bank of references. Sequences of meaning are separated into themes identified by way of the illustrated narrative conveyed by the data, which revealed twenty-two themes (appendix H), which are grouped under the headings of Beliefs, Behaviour, Affect, and Connectedness.

4 Cross-case Analysis

Proceeding from single-case to multiple-case analysis, the NVivo references were thematically grouped on a case by case basis into a matrix of dominant, continual, or intermittent themes in order to review the strength of each theme for each participant (Appendix I). The matrix revealed themes that were dominant and common to all participants, continuously present themes, and themes that were subordinate, but significant. This process confirmed that all the identified themes

were present for all participants, and provided a positive indicator of the emerging overarching psychological structures. These multiple analyses provided the researcher with a deeper, richer and more powerful cognitive map of the data.

5 Psychological Structuring

In order to avoid a superficial or premature summation of the data, the lists of references under each theme in NVivo were re-distributed into groups by reviewing the meaning inherent in each reference and through assessment of the researcher's reflective notes. Through this process the themes were related to a more conceptual framework of known psychological structures. As a result of this process four additional themes were identified, providing a total of twenty-six themes.

It was found that many similar themes emerged from each of the ten transcripts and that many of the references, due to their rich content, applied to more than one theme. From the final mapping of the data, the overlapping nature of the themes became identifiable and a final model structure of five interconnected domains was revealed.

The three self-report psychological questionnaires were scored and compared against population norms.

Results

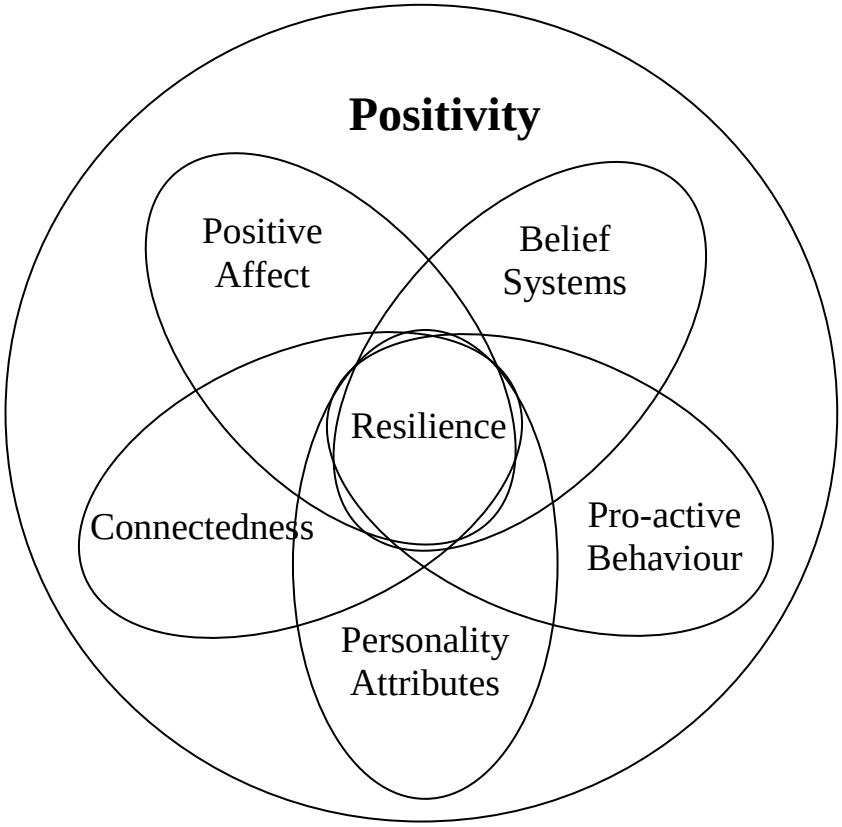

Figure 1. GP Model of Resilience

Resilience is identified as a meta-ability comprising five interrelated domains of functioning including: *Belief Systems* that inform behaviour; *Pro-active Behaviours* aligned with constructive actions; *Personality Attributes* associated with positive conduct; *Connectedness*, confirming the importance of supportive relationships; and *Positive Affect* relating to a positive approach to life. These domains were found to operate within a superordinate structure of Positivity.

The five domains encompass twenty-six themes identified from within the transcripts, as listed in Table 1. For ethical reasons, the full transcripts do not form part of this thesis, as given the personal nature of the interview data, the participants may be identifiable. A table of transcript references is included at Appendix J.

Table 1

Five Domains of GP Resilience and Associated Themes

1 Belief Systems	2 Pro-active Behaviour	3 Personality Attributes	4 Connectedness	5 Positive Affect
Life philosophies	Positive coping	Openness to experience	Family and colleagues	Subjective well-being
Balance	Self-direction	Optimism	Social	Appreciation
Positive beliefs	Self-efficacy	Conscientiousness	Community	Acceptance
	Self-care	Agreeableness		Flow
	Pragmatism	Humour		Empathy
		Gratitude		Self-awareness
		Humility		Equanimity
				Mindfulness

Positivity is identified as a superordinate structure, from which the five domains contribute positive behaviours, cognitions, and emotions which interconnect to form resilience. Resilience is identified from the interrelatedness of the positive themes as follows:

1. Belief Systems

Three belief systems were found to contain positive perceptions with regard to the self and the role of GP. The first theme of *life philosophies* embodies positive personal values and principles for responding to life conveyed by all participants and

exemplified by the comments: "*In adversity you did your best*" and "*Jump high for the big things, that's about fulfilling your abilities*".

The *positive beliefs* expressed were aimed at the realisation of potential in life, and were supported through the second theme of *balance*, which represented the goal of developing and maintaining work/life balance within the role of GP, as shown by comments including: "*Aim to be in balance that is the natural thing*" and "*I think the important part with the work balance is having interests outside of work itself*". This reflects a disciplined assumption of responsibility for achieving balance.

The possession of positive *life philosophies* and an intrinsic belief in the need to create and maintain *balance* relates to the third theme of *positive beliefs* in which GPs communicated an immense satisfaction and fulfilment gained from the role of rural doctor. In acknowledging the complex challenges of the role, from patient demands to lack of support from the wider medical system, a positive outlook appears to mediate between the demands of the role and the benefits received from undertaking work that is '*intrinsically interesting'*, and provides the '*privilege of being privy to people's lives'*. Through all the demands on time including long days and call-outs, pressures of dealing on a day to day basis with illness and suffering, and the fact that "*general practice is the sump of the medical world*", the prevailing message was that the work was enormously energising. Each GP expressed their enthusiasm and absolute dedication to being a doctor which surmounted all negative aspects of the role, represented by the comments: *"I think I am more than just sustaining, more than just getting by*" and "*I'm committed to a community where I'm happy and comfortable, and see this as, as good as it gets*".

These three themes overlap with themes within *Pro-active Behaviour* in that GPs confidently and deliberately restructured their work and personal lives in order to be able to continue to function effectively in a role that they know and expect to be demanding. This occurs due to the knowledge that what they do is inherently meaningful and worthwhile, both personally and within the broader community context. Overlap also occurred with the themes of *connectedness* to others and themes of *gratitude* in that support from spouse, family, and colleagues was valued as crucial in creating and maintaining work/life balance. Strong association was also present for the theme of *flow*, as participants were able to immerse themselves in the moment, at work and in leisure, matching their skills to challenges, which represents optimum human functioning.

2. Pro-active Behaviour

Resilience was displayed through five themes of *pro-active behaviour* that represent the GP's ability to create and maintain direction and motivation in their lives. The theme of s*elf-direction* was highly evident in the processes that the GPs put into place in order to influence the structure of their work and personal time. This theme was dominant for all GPs, and is represented by the references: "*I have a small practice and I have deliberately kept it that way*" and "*Well, its not always easy, one has to make the effort to make the job a little bit how you want it as well*". This ability to self-direct was supported by the second theme of s*elf-efficacy* which demonstrated the belief in the capacity to accomplish outcomes through self-action, and the attitude that the work environment could be controlled. This sense of control enabled participants to maximize levels of personal time necessary to maintain a desired work/life balance, expressed through comments such as "*Would this make me*

a better doctor? and I didn't actually think that it would, so I didn't do it" and "*I feel I have the option of working and determining my own hours*".

The recognition of the need to direct and control the work environment was highly influenced by the third theme of *self-care* in that the doctors, as with many health and helping professions, fully appreciate the need to achieve care for the self, a tenet that is deemed sacrosanct in order for these professions to avoid burnout or compassion fatigue. *Self-care* was achieved through exercise, and by having their own GP, being prepared to seek help and by taking regular holidays: "*Daily exercise is really important to me, and if I've had a bad day, or a tragedy has occurred, I'll go for a lovely long walk on the beach*" and "*For me it's important to have time to myself, I'm very very possessive about that time to myself*".

The fourth theme of *positive-coping* supports the three earlier themes, in that it involves planning rewards, being accepting of situations that cannot be controlled, and developing roles and supports outside of general practice: "*I learnt to cope and understand that you can't shut yourself in a brick wall, you have to open doors, and the more doors I opened the more help I found*" and "*It's refining the ability to turn off and turn on*". *Positive Coping* promotes the development of personal or social outlets for some GPs, and a combination of both for others. From tai chi to reading a book, playing golf, or a planned holiday. These positive coping strategies represent a conscious effort to create support and diversity within life and are accepted as a necessary part of being able to function as a doctor.

The fifth theme of *pragmatism* was expressed through the ability to be practical and realistic, and to demonstrate a down-to-earth and sensible approach to life, communicated through comments including: "*You aren't going to get it right all of the time, no-one can*" and "*I just get brutal, it's as simple as that, if you want to go and do something then you just do it"*.

These pro-active behaviours provide the GPs with the ability to control their environment through planning, taking stock of what is needed to achieve fulfillment and then making it happen. Effort is applied to the creation of a work structure that meets financial needs, while also recognizing that achieving a balance between income and quality of life means being prepared to take responsibility for creating that balance. A recurrent theme within *self-care* was the need for boundaries, to not take work home if possible, and to plan breaks. The majority of the GPs achieved high levels of *self-care,* set in motion by high levels of *self-direction,* and actioned through *self-efficacy*. The prevailing attitude was acceptance of the physically, emotionally and personally demanding role of the doctor, combined with the pragmatic attitude that if they are going to cope within this role and continue to enjoy it to the high degree that they do, then self-care is not an option or a luxury, it is a personal obligation.

3. *Personality Attributes*

The expression of resilience was identified through seven themes of personality that captured aspects of the GPs' thoughts, behaviour, and feelings. The theme of *openness to experience* was communicated through a preference for variety, and a high level of intellectual curiosity. This theme revealed that the majority of the

GPs had travelled around the world in search for new challenges and to increase their skills and knowledge, and was evident in the enthusiasm revealed for new experiences:: "*I am always enthusiastic about anything new that is available*" and "*You don't want to get to a stage where you don't want to try anything new, because then you go into brain failure and stagnate"*.

The second theme of o*ptimism* represented the ability to put a positive interpretation on events, and to anticipate the best possible outcome, which was expressed though belief in their ability to succeed, and through a generally upbeat attitude to life: "*I think that basically my glass is half full rather than half empty"* and *"Some people start life expecting 100 percent and grizzle about every percentage point they lose out on, and I think I start perception at 50 percent, and anything above 50 percent that I gain, I celebrate"*.

The third personality theme of *conscientiousness* is evidenced by a self-disciplined striving for achievement and success through purposeful planning and persistence. *Conscientiousness* was evident within the group given the that the role required long hours, with few if any breaks, constant demands on time, both in and out of hours, and complex patient demands: "*It's long hours, you need a fair bit of stamina in putting up with things that are not comfortable*" and "*Because the last patient on Friday can be just as serious as the first person who walks in on Monday and usually they are*".

The fourth theme of a*greeableness* reflects the ability to demonstrate compassion, cooperation, consideration, and willingness to compromise. GPs

conveyed concern and consideration for patients, and were not comfortable in having patients wait too long, and strived for a good and timely system of care: "*I enjoy people, I enjoy helping them*" and "*When you know you have really helped someone, that's a really nice feeling*".

All themes were supported by the theme of *humour* which was expressed as a healthy, mature style of not taking oneself too seriously, and a self-deprecating and self-accepting viewpoint. A sense of *humour* was expressed by all GPs, from the wry and gentle laughter that accompanied difficult discussions around the more painful aspects of being a doctor and past personal tragedies, to being able to be amused by the absurdities of life: "*You soon work out who are the people who sidle up to you at a party and ask you about their rash (laughs)*" and "*Like if you're at some child's birthday party and someone gets up on the roof, someone will say something like 'it's alright if they fall, there's a doctor here'. And you think Oh God help us (laughs), like, yes I will put their spine back together (laughs)*".

The sixth theme of *gratitude* represents the ability to be thankful and appreciative, and also the tendency to altruism: "*A desire to pay back to the practice and my colleagues, you know they'd laugh if they heard me say that, and obviously I wouldn't say that out loud (laughs)*" and "*I feel quite privileged really*". The expression of *gratitude* was consistent, with the majority of GPs stating that they *'were so lucky'*. Even in the midst of significant personal and professional challenges and tragedies, there is a tendency toward appreciation and the ability to find some aspect of a situation for which to be thankful.

The seventh theme of *humility* is associated with modest and humble responses, and an unassuming style. *Humility* was displayed as an intermittent theme throughout the group which is to be expected in that humble people do not speak of their humility, rather it was an inferred aspect to other themes: "*We just live everyday lives, and every now and then you bring your skills to bear to be useful to someone*" and "*One of the privileges of being a doctor is that you do see so much of people's lives*".

Personality Attributes contributed to the ability to work, compromise, and cooperate with colleagues and practice staff as part of a practice team, which overlaps with the major domain of *Connectedness*. *Humility* was evident from the lack of egotism with regard to the importance of the role of the GP, and an unassuming, and down-to-earth view of themselves in the face of the kudos and gratitude that is directed at GPs every day. GPs were universally *optimistic* with regard to finding benefits and being appreciative. *Optimism* was also discerned as a persistent positivity and was related to a total absence of negative affect in that even when discussing significantly painful events, participants focussed on the positives and benefits, and managed to be jovial.

4. Connectedness

The domain of *Family and Colleague Connectedness* represents the importance of relationships for all GPs. Having the support of a loving spouse was highest for most GPs, and represented a solid base from which to function as a GP. *Gratitude* is expressed for having the support of a spouse and/or family, with high value also placed on being able to share the burdens of the role with colleagues who

fully understands: "*I don't think I could have done what I have done for the past six months, five days a week doing ten hours days sort of thing if I didn't have that resilience and support from here, and from home*" and "*I think that having a partner is critical to a work life balance. That can't be measured; I don't know how single GPs do it*".

Social Connectedness encompasses the ability to build an enjoyable social life through various sporting and leisure activities. Social bonds provide immense support and are highly valued: *"I'm involved in junior soccer and other bits and pieces, and I do motor sport and all sorts of stuff"* and *"You get to meet a range of people outside of the medical profession, and that's invigorating in a way because you are not getting caught up in the same thing, going to all the medical things that you always deal with"*.

The theme of *Community Connectedness* is conveyed through the high importance that belonging held for the GPs: *"I want to help out there, and in a small community one has to"* and *"You become involved, and people are really great, and it's lovely"* and *"It's not related to work, I belong in this community"*. Social and Community support and involvement were very high for the majority of GPs with every GP involved in either one or more activities within sporting clubs, community, volunteer, and service groups, schools, and several personal hobbies.

The references that conveyed *appreciation* for the support of a spouse, and support from *family and colleagues*, are considerable, and overlap with *gratitude, humility, self care, positive coping, subjective well-being, positive beliefs and*

balance. This overlap conveys appreciation for the benefits of friendship and social supports and the recognised importance of creating and maintaining these supports. Overlap occurs with *openness to experience*, in that a number of GPs took up interests that were challenging and entirely new, involving the learning of unfamiliar skills. *Social Connectedness* overlaps with *self-care* in that quite a few of the leisure and sporting interests were connected to the intention to say fit and healthy and to finding stimulating outlets outside of general practice. Overlap also occurred with *self-efficacy*, in that GPs spoke about being proactive in their planning and pursuit of activities that provide new challenges. *Social Connectedness* overlaps with *balance* in that it is recognised that it is important to have interests outside of medicine, and also *flow*, in that engagement in hobbies and social interests provided the experience of immersion and enjoyable distraction.

Connecting with the community on various levels provides a solid base from which the GP can thrive. Being involved at a community level, and providing skills to support the community, in return, supports the GP. This theme highlights the importance of feeling integrated and fulfilled: "*If I defined myself just as a doctor I think that would be pretty sad*". There was a strong aspect of altruism within the group, which provides overlap with the major theme of *Personality (associated with gratitude)*, with many GPs giving of their time and expertise in the service of the community, from providing free medical care at sporting events, to providing educational sessions in the school setting, and being involved on the committees of various teams and clubs. *Connectedness* was articulated as being a fundamental component of being able to function effectively and successfully as a doctor, and as a person.

5. Positive Affect

The domain of *Positive Affect* reflects active awareness, which supports the GPs' ability to maintain equilibrium throughout their professional, personal and social lives. This construct in psychology has been associated with the ability to increase attention, intuition, and creativity, and was dominant for all GPs.

The first theme of *flow* describes the mental state of being fully immersed in activity, whether work or leisure. This represents energized focus and immersion in the role: "*There were periods where I could forget about my personal problems and just concentrate on what I was doing*" and *"I loved hanging out of helicopters and doing all the search and rescue in the middle of the night and racing out to an accident, it was exciting (laughs)"*.

Flow is connected to the second theme of *appreciation* which was expressed through the ability to feel upbeat, and to be able to appreciate the moment. This positive feeling was contained in the following references: *"It's a case of just practicing medicine and if you do that then it's amazing how unstressful it gets"* and *"I picked it up, and we got everything on the right track, and he (the patient) said thanks very much for last week, I really appreciated that, and that gives you a (lifting motion), wow, fantastic, great"*.

The theme of *acceptance* revealed the cognitive or emotional state whereby the GPs were able to accept negative or uncomfortable situations: *"I just go with the flow, see what is around, see what I can do"* and *"If that's how it's going to be then that's how it's going to be"*. The theme of *acceptance* was consistently evoked

within each GP, from an acceptance of the fact that some patients would never quite do the right thing, and acceptance of the limitation of support from the medical system within the region, to acceptance of their own limitations.

The first three themes relate to the fourth theme of *subjective well-being* which is communicated through a satisfied evaluation of life. This theme represents a strong and consistent expression of happiness and contentment with life both personally and professionally: "*I love my work, I work because I like it*" and "*This is not a means to an end, it's a great place to be*". The term 'fulfilled' was repeatedly present within the researcher's reflective notes, with the theme of *subjective well-being* linked to the representation of fulfillment. Each GP communicated their enjoyment and satisfaction in the role of being a doctor in a rural community.

The fifth theme of *empathy* was consistent for all GPs and was communicated through a high level of concern and compassion for patients, and through the GPs' capacity to feel and show warmth and affection toward patients: "*I think that keeps you going because on some days when you are sort of tired and one patient will just say, "can I give you a hug and a kiss? and you suddenly think, you know oh, with all these lovely people*" and "*I might feel bad that the person has died but imagine how the family feels"*.

The sixth theme of *self-awareness* captures the ability of the GPs to focus their attention inwardly by evaluating and comparing present behavior to internal standards and values, and being conscious of individual identity. This aspect was expressed through the ability to self-evaluate thinking and functioning: "*I've learnt*

from past experience that if you get yourself frustrated and stressed then you actually perform worse" and "*You have to be a bit self-analytical*". *Self-awareness* was shown in the ability to know and express aspects of the self, such as being an analytical or motivated person, having learnt from past experience, and being aware of the self within the broader context of work and other life demands.

The seventh theme of e*quanimity* is reflective of the earlier six themes and reveals the ability to remain calm, stable, and composed, especially under stress. It relates to the concept of balance and centeredness which endures through changes in circumstances, and was present for all GPs: "*I am not surprised when there are some hard moments, to me that is just part of the job, so it's an expectation*" and "*The more information you can get about any situation, the less stress there is attached to it. Because you are not suddenly thinking where am I at? What am I doing? You have to do things in time*".

The ability to be immersed in and energised by the role was expressed by all GPs, with the expression of *flow* overlapping with *positive beliefs and acceptance*. *Flow* overlaps with *self-direction, self-efficacy,* and *self-care* in that the GPs deliberately influence their work and personal lives to maximise their ability to function well, through undertaking activities that transfer focus beyond the work role.

Acceptance overlaps with themes within *Positive Beliefs* where those references clearly contain an upbeat attitude of *gratitude* and positivity toward work and other people, also with *self-efficacy* in that it links to the *appreciation* of being

able to control the work environment. Overlap occurs with *pragmatism* in the ability to view life from a realistic and accepting perspective. Also overlap between the manifestations of *subjective well-being* associated with the value of *Connectedness*. These themes overlap with the themes of *gratitude* and *agreeableness,* in that all GPs declared how lucky they are to be doing what they do, and that they recognise the benefits that come from working in a rural setting.

The final theme of *mindfulnes*s was identified through its association with all themes under the domains of *Positive Affect* and *Belief Systems,* and themes within other domains, including *openness to experience*, *optimism*, and *self-directedness* which indicate that the participants demonstrate many aspects of mindfulness: "*There has been a big part of my personal life, developing what you might call the inner life'. Mindfulness* also overlaps with the theme of *flow*, as both constructs involve focused concentration (Baer, 2003; Bishop et al., 2004; Brown & Ryan, 2003; Csikszentmihalyi, 1990, as cited in Snyder & Lopez, 2007).

Through each of the themes associated with *positive-affect*, participants expressed their pleasure and enjoyment in interacting with, and being able to help people at a deeply personal level. Each of these aspects interact to engender fulfillment, and each aspect nourishes, protects and/or supports the other, producing a global experience of positive well-being.

Psychological Scale Results

Results from the self-report psychological questionnaires are descriptive results intended to guide the qualitative data and are not considered to be interpretive results.

Results from the Connors Davidson Resilience Scale (CDRS), found that resilience for the GP group Mean = 75.6 (SD 11.33) was similar to resilience in the general population Mean = 80.4 (SD 12.8) (range unavailable). This descriptive measure supports the presence of resilience identified through the qualitative aspect of the study.

Results from the scoring of the Depression, Anxiety, and Stress Scale-short-form, found that all but one GP was in the normal range for depression (0-78th percentile) with the results of one GP indicating the presence of mild depression (78-87th percentile). All GPs were in the normal range for anxiety and stress (0-78th percentile).

Results from the Five Facet Mindfulness scale (Table 2), found that the GPs rated similarly on the five facets in comparison to two population samples, including a community sample, and a highly educated sample.

Table 2

Means and Standard Deviations for GPs on the Five Facet Mindfulness Scale compared with Established Population Samples

	Current GP Sample		Community Sample		Highly Educated Sample	
Facet	M	SD	M	SD	M	SD
Observing	25.60	5.10	24.32	5.48	27.04	5.63
Describing	29.60	5.27	24.63	7.06	30.01	5.63
Act Aware	31.30	4.83	24.57	6.57	28.32	5.21
Non-judging	31.80	4.84	23.85	7.33	29.13	5.79
Non-reactive	24.00	3.86	19.53	4.88	22.82	4.19

N=10

Discussion

The study effectively identified resilience as a meta-ability composed of five interconnected domains of functioning, operating within a superordinate structure of positivity. The domains represent behavioural, cognitive and emotional functioning found to be consistently present for each GP. The multi-faceted and interconnected nature of the results is supported by the view of resilience as being a trait, a process and an outcome (Bromley, 2005). This finding is supported by contemporary resilience literature through the paradigm of positive psychology.

Within the field of positive psychology, several personal attributes have been correlated with resilience, these include hope, optimism, flow, capacity for insight, empathy, and altruism (Snyder & Lopez, 2002). These attributes correspond to themes identified for participants within the study. Theoretical and empirical literature relate positive emotions to flexibility in thinking and problem solving, adaptive coping, support for enduring social resources, enhanced well-being, and protection against the psychological and physiological effects of negative emotions. These attributes, which mirror identified themes, may contribute to the positivity of participants and their resilient approach to life. It is proposed that the experience of positive emotions in situations of adversity or challenge may contribute to stress resistance and play a role in recovery processes (Ong et al., 2006).

The study identified a number of factors that appear to be contributing to participant's overall capacity to thrive which have foundation in related research. Cross-sectional, longitudinal, and experimental data show that positive and happy

individuals are more likely to have fulfilling marriages and relationships, high incomes, superior work performance, community involvement, and robust health, with evidence supporting that positive emotions, as well as chronic happiness, are associated with resources and characteristics that parallel success and thriving (Lyubomirsky, King & Diener, 2005). Fredrickson (2009) cites several empirical studies that evidence that positivity impacts on physical health through lowering stress hormones, increased production of dopamine and opioids, and enhanced immune system functioning, These findings provide substantiation for the significance of positive emotions in resilient functioning as evidenced in the current study.

The approach of positive psychology in the study of resilience adds to the profile of the resilient individual and offers substantial insight as to the nature of optimal functioning. It is evident within the findings of this study that resilience arises from dynamic interactions within and between the individual and their environment as supported by Masten (1994). Themes identified within each domain represent aspects of functioning identified in positive psychology, with evidence to suggest that people who approach life's challenges with a positive outlook, and confidence in their abilities to succeed, are more resilient (Snyder & Lopez, 2007).

Domain 1 - Positive Beliefs

Individuals who operate through positive Belief Systems, possess deep values and meaningfulness for life which provides scaffolding in times of trouble (Coutu, 2002; Diener, Suh & Oishi, 1997). The highly positive beliefs through which the GPs navigate their lives, draws a parallel with studies that have found that higher

levels of positivity are linked with broader behavioral repertoires, greater flexibility and resilience to adversity, greater social resources, and optimal functioning (Fredrickson & Losada, 2005). *Positive beliefs* contribute to fulfilment and thriving as shown through the related domains of *positive affect* and *personality attributes*. The interconnected composition of these themes signifies the presence of the construct of eudaimonia, a recognised construct within positive psychology literature. The term eudaimonia translates to happiness, however, the term, as first used by Greek philosopher Aristotle (384 BC – 322 BC) meant 'doing and living well'. The construct of eudaimonia has been linked to flourishing (Snyder & Lopez, 2002) and is associated with living within an optimal range of human functioning, that represents goodness, growth, and resilience (Frederickson & Losada, 2005). The association of eudaimonia for participants comes through their intrinsic interest in a professional role which is challenging and meaningful, and of high value within society.

For these participants, their role goes beyond being a job, it is what is deemed a 'calling', in that the work is a labour of love which energises, rewards and fulfils them (Wrzesniwski, 2003). Participants possess the ability and motivation to control work and leisure, which ensures a balanced life, achieved through the formation of close personal, professional, social and community relationships. Fredrickson (2009) states that flourishing represents an individual's best possible future and can be realised through positivity.

Domain 2 - Pro-active Behaviours

Resilient individuals believe that events follow from their actions, and can be controlled (Bromley 2005). Within this study *self-efficacy* is influenced by the self-appraisal of capabilities; the stronger the perceived self-efficacy, the higher the challenges set (Bandura, 1993) with people who have the opportunity to do what they do best, and to act on their strengths, more likely to flourish (Fredrickson, 2003). Proactive behaviours of *self-efficacy* and *self-direction*, in conjunction with secure and supportive relationships, promote resilience through enhancing resistance to adversity, and providing confidence in the face of challenge (Bromley, 2005). The overlap of domains supports that positively valenced moods and emotions lead people to think, feel, and act in ways that promote both resource building and involvement with approach goals (Lyubomirsky, King & Diener, 2005). *Self-efficacy* together with *positive coping* play a protective role against negativity and provide enabling factors that assist participants to select and structure their environments and set a successful life course (Snyder & Lopez, 2007). The pro-active behaviours demonstrated within this group may also be linked to level of intelligence, as high levels of intelligence contribute to resilience. Intelligent people appear to have more self-help skills and capacity to cope in the face of stress (Friborg et al., 2005).

There is strong integration between the domains of *positive affect*, *personality attributes* and *pro-active behaviour*, supported by evidence that personality and past successes contribute to happiness, which in turn leads to approach behaviors that often lead to further success (Lyubomirsky, King & Diener, 2005). Strong behaviours and motivations were revealed in the associated theme of *self-care* which revealed that the participants pro-actively created and sustained self-care practices,

which is perceived as essential in maintaining the stamina and resilience necessary to fulfill the role of rural doctor.

Domain 3 - Personality Attributes

Bromley (2005) proposes that a healthy personality is both the means and the end of the successful development of resilience. Personality factors found within the group were notably positive, with three identified themes corresponding to factors within the Five Factor Theory of Personality. This theory was developed from research on the nature, origins, and developmental course of personality traits, and the relation of traits to many other personality variables (McCrae & Costa, 1987). Empirical studies of resilience have evidenced that the resilient personality profile is characterised by a high score on all the Five Factor personality traits: extroversion, neuroticism (inversed), and especially with the three factors of *openness to experience*, *conscientiousness*, and *agreeableness* identified in this study.

The overlap between domains of *personality attributes*, *pro-active behaviour*s and *connectedness* are reinforced and supported by research literature. *Personality* themes identified in the study equate to aspects of the construct of hardiness which is associated with resilience and represented by personality dispositions of being active, connected, and purposeful, of controlling the environment, and being welcoming of challenges and change. Hardy individuals believe they are in control of their fate and appear to remain well despite stressors (Luthar, 2006; Tugade & Fredrickson, 2004). Overlap occurs between *Personality Attributes* and the domain of *Positive Affect* which is a construct associated with the mature defences of *humour*, altruism

(*gratitude*) and o*ptimism* (Lucas, Diener & Suh, 1996; Vaillant 2000) which relate to themes identified under various domains within the study.

Domain 4 - Connectedness

Social networks are an important factor that support resiliency in individuals. These networks do not occur by chance, they are carefully constructed by individuals who demonstrate pro-social behaviour (Lemay & Ghazal, 2001). The importance of personal and social orientation was highly evidenced in the study through the domain of *Connectedness*. Positive social orientation is the most protective of factors amongst several social factors, including measures of external support systems and family and social cohesion, with people who score highly on these factors shown to be psychologically healthier, better adjusted and more resilient (Friborg et al., 2005; Hjemdal et al., 2006; Luthar, 2006). Considerable empirical evidence supports that strong social support, frequent involvement with groups, and high organisational affiliations, are linked to higher levels of happiness (Lyubomirsky, King & Diener, 2005).

Aspects of sociability relate to resilience through a tendency to reach to others, and through engagement rather than withdrawal which reflects an expectation that others will provide support (Bromley, 2005). Good relationships are not only critical for resilience; it appears that resilience rests fundamentally on relationships (Bonnano, 2004; Luthar 2006; Snyder and Lopez 2002).

Domain 5 - Positive Affect

Strong empirical data supports that frequent positive affect provides a good prediction of self-reports of happiness (Diener et al., 1997). The theme of *Positive Affect* is linked to the themes of *mindfulness* and *equanimity* which reflect the process of relating openly, meaningfully, and positively with experience (Bishop et al., 2004; Langer & Moldoveanu, 2000; Snyder & Lopez, 2007). These skills are apparent within the participants of this study. Evidence supports that happy people, who experience a preponderance of positive emotions, tend to be successful and accomplished across multiple life domains. Success, per se, does not lead to happiness, but positive affect engenders success (Lyubomirsky, King & Diener, 2005). Competence, belonging, and autonomy, as evidenced within participants of this study, contribute to personal well-being and social development, with individuals who achieve these states perceiving global life satisfaction, intrinsic motivation, and the ability to fulfill their potential and seek out progressively greater challenges (Diener, Suh & Oishi, 1997; Seligman & Csikszentmihalyi, 2000).

The domain of *Positive Affect* included the theme of *flow*, reported by participants across work and leisure activities. *Flow* is related to skill, concentration, and perseverance which leads to *subjective well-being*. People who experience *flow* report the experience as being in as positive a state as it is possible to feel, and that their lives are purposeful and meaningful (Csikszentmihalyi, 1999). As a result of consciously and deliberately structuring their lives to achieve balance, GPs experience the ultimate in human functioning, where challenges are matched with ability, producing pleasure and energy (Snyder & Lopez, 2007).

Related to the theme of *subjective well-being* is the theme of *acceptance*, which represents the ability to be experientially open to the reality of the present moment, and is an active process of choosing to take what is offered with openness and receptivity, which represents the origin of many of the desirable characteristics, resources, and successes that correlate with happiness (Shapiro, Carlson, Astin & Freedman, 2006; Snyder & Lopez, 2007).

The study identified themes, predominantly within the domain of *Positive Affect*, that have been evidenced to relate to the construct of *mindfulness*, which necessitated the inclusion of *mindfulness* as a theme. Multiple overlap between themes of *Positive Affect* and other domains reinforces the interconnectedness of the findings. The experience of *mindfulness* has been associated with lower neuroticism, anxiety, depression, and negative affect, as was evidenced in this study. And associated with high *positive affect*, life satisfaction, self-esteem, *optimism*, self-actualization *self-awareness, acceptance, empathy, gratitude, openness*, non-judging, generosity, *subjective well-being, flow*, and increased positive emotions (Baer, 2003; Bishop et al., 2004; Brown & Ryan, 2003; Csikszentmihalyi, 1990, as cited in Snyder & Lopez, 2007). These positive attributes are particularly congruent with themes associated with participant attributes.

Mindfulness is recognised as a phenomenon associated with outcomes as diverse as physical health, psychological well-being, work and sport performance, and relationships. It has also been linked to the phenomenona of *equanimity*, and associated with self-challenge and striving to achieve in the face of adversity, which have been associated with achieving eudaimonia ((Brown & Ryan, 2004; Urry,

2004). Research shows that aspects of mindfulness relate to self-regulated behavior and positive emotional states, and has been found to be an important factor in understanding the predictors of well-being (Brown & Ryan, 2003; Urry, 2004). The overlap of themes within this study appears to support that mindfulness, within the participants, is composed of interrelated positive attributes.

Positivity

"*Positivity, I've discovered, is at the heart of human resilience*".

(Barbara Fredrickson, 2009)

The discovery of interconnected themes of positivity, resilience and mindfulness in this study, is supported by empirical research which has proposed that positivity can be transforming, by generating mindfulness, optimism, resilience, and social resources (Fredrickson, 2009). These qualitative results were assessed in conjunction with the quantitative data which indicate that the participants possess levels of resilience and mindfulness comparable to the general population, as well as an absence of negative affect. Consequently, it is proposed that the factor distinguishing the participants from their peers is not solely the expression of the construct of resilience, but functioning exhibited through a complex interplay of positivity.

The study identified positive abilities, emotions, and cognitive processes, present for all GPs, which provides an association between the construct of resilience and positivity. Frederickson's (1998, 2001) research into positivity spans over twenty years and provides the 'broaden and build' model of positive emotions. This model proposes that successful people are in a positive state which enables them to expand

resources and widen their repertoire of skills for future use (Fredrickson, 1998, 2001, as cited in Cohn et al., 2009). This theory suggests that positive affect produces future health and well-being, as positive affect accumulates and compounds over time. Positivity can transform individuals for the better, making them healthier, more socially integrated, knowledgeable, effective, and resilient (Fredrickson, 2005).

Positivity has been associated with positive psychological and social functioning through self-acceptance, purpose in life, environmental mastery, positive relations with others, personal growth, and autonomy (Fredrickson, 2005). The experience of positivity through positive emotions during times of stress, prompts individuals to pursue novel and creative thoughts and actions that promote effective coping resources to protect against negative life experiences (Luthar, 2006; Tugade & Fredrickson, 2004). It has been evidenced that positive emotions represent important facilitators of adaptive recovery, with studies showing that individuals who possess resilient personality styles experience faster cardiovascular recovery and recovery from stressful life events, in line with their levels of positivity. Results from empirical studies suggest that positive emotions are a prominent feature of psychological resilience in later life (Curtis & Cicchetti, 2003; Fredrickson & Losada, 2005; Ong et al., 2006)

Studies measuring positivity suggest that inducing positivity broadens visual attention and creativity, alters the brain and expands and changes interaction with the environment. A meta-analysis of almost three hundred studies concluded that positivity produces success in life as much as it reflects success in life (Lyubomirsky,

Sheldon & Shade, 2005). Ultimately positivity matters (Folkman & Moskowitz, 2000, as cited in Fredrickson, 2009).

The finding of positivity as a superordinate paradigm, offers a cohesive rationale for the complex interplay of positive attributes conveyed by all participants.

Implications of the Research

Several recommendations are proposed in response to the finding of positivity within the study. The significance of positive personal relationships and social supports was evident for the participants, which highlights the importance of providing new GPs within rural settings with structured orientation and ongoing support to consolidate their place within the medical practice and the community. Support for doctors in the rural setting could be enhanced through the establishment of GP peer networks facilitated by established GPs in the community. The peer-network could support new doctors to link with established GP networks, or areas of interest, including sporting clubs, the arts, or service groups. The GP peer-mentor role could take the form of a Government reimbursed position for GPs within the rural setting, similar to existing positions that employ GPs to facilitate health programs to their colleagues through Divisions of General Practice.

In recognition that GPs in the rural setting are often placed in social situations with their patients, benefit may be found in providing training for doctors on the establishment and maintenance of personal boundaries within a small community, which may encourage greater social integration.

The study established that GPs who have a level of control over their work/life balance appear to flourish, therefore recognition by employing medical agencies with regard to providing GPs with the capacity to structure this balance, may be beneficial.

The findings of the study indicate a strong link between the importance of personal and social connectedness and positive functioning. Therefore, greater support to assist rural GPs with community integration may contribute to the retention of rural doctors through increased connectedness. A number of Divisions of General Practice in rural areas employ staff specifically to provide one-on-one orientation to new doctors. This is especially important for the orientation of overseas trained doctors, who may never have previously lived or worked within Australia. This focused support may be essential in establishing a positive rural experience. Doctors new to the rural setting require timely and informed familiarisation across local health systems, hospitals and allied services, the Medicare system, and assistance with in-practice software systems. Systems of support for rural doctors would need to be adequately funded to allow facilitation of an enhanced rural doctor experience.

Importantly, the study identifies aspects of resilience and mindfulness, operating within high levels of positivity. As mindfulness and positivity can be learnt (Fredrickson, 2009) and appear to contribute to resilience, there is potential for the development of training for rural GPs to enhance their capacity to be mindful, to build their resilience, and ultimately to increase their positivity, which has been evidenced to contribute to thriving and success in life.

Limitations

Constructs within positive psychology are immensely complex and problematic with regard to agreed definitions, relatedness, and measurement of constructs, therefore a more refined research focus with regard to aspects of positive functioning would be constructive.

The design of the study may have been strengthened through the recruitment of a larger sample as this may have offered greater reliability of results, however time was a factor. The use of additional selected measurement scales for assessing resilience factors and personality attributes may have extended the findings of this study. Qualitative interviewing is a skill, the researcher identified that the latter interviews became more focussed with regard to prompts by participants, thereby improving the elicitation of constructive information.

Future Research

Further research conducted with random samples of GPs would be beneficial in exploring the different ways in which rural doctors are resilient. Comparison of urban and rural GP samples to assess and compare functioning would be constructive, as well as a comparison of gender, and years of experience in the rural setting. An interesting factor to pursue would be an assessment associated with the nationality of participants, as all but three GPs were overseas trained doctors.

An exploration of positivity through the 'broaden and build' model of positive emotions would be informative as to how GPs achieve resilient functioning. Additionally, research to explore and identify the psychological constructs that

contribute to positivity amongst GPs, other health practitioners and also other professions, would add to the growing literature on this topic, which would strengthen the depth of knowledge in this exceptionally dynamic field of psychological research.

Conclusion

In line with the research aim, the study successfully identified the psychological processes and wellness practices operating within the group. Results indicate that rural GP participants possess positive cognitions, behaviours, and emotions, revealed through five domains of functioning. The interconnected nature of these domains suggests that resilience and positivity provide a strong foundation from which to function as a rural doctor.

The study revealed that all participants are clearly living positive and fulfilling lives in a rural and remote medical setting. It is hoped that the findings from this study may be used to generate further research to better support rural general practice, and to positively reflect the rural GP experience.

> A Cherokee grandfather told his son about a battle that rages inside people. He said "The battle is between two wolves. One is Evil, it is anger, envy, jealousy, sorrow, regret, greed, arrogance, self-pity, guilt, resentment, lies, false pride, superiority, and ego. The other wolf is Good, it is joy, peace, love, hope, serenity, humility, kindness, benevolence, empathy, generosity, truth, compassion, and faith. After a while the grandson asks, "Which wolf wins?" The grandfather replies, "The one that you feed".
>
> - Anonymous

References

Baer, R. A. (2003). Mindfulness Training as a Clinical Intervention: A Conceptual and Empirical Review. *Clinical Psychology: Science and Practice, (10* 2, 125-143.

Baer, R.A., Smith, G.T., Lykins, E., Button, D., Krietemeyer, J., Sauer, S., Walsh, E., Duggan, D., & Williams, J.M.G. (2008). Construct Validity of the Five Facet Mindfulness Questionnaire in Meditating and Non-meditating Samples. *Assessment. 15*(3), 329-342.

Bandura, A. (1993). Perceived Self-Efficacy in Cognitive Development and Functioning. *Educational Psychologist*, *28*(2) 117-148.

Bishop, S.R., Lau, M., Shapiro, S., Carlson, L., Anderson, N.D., Carmody, J., Segal, Z.V., Abbey, S., Speca, M., Velting, D., & Devins, G. (2004). Mindfulness: A Proposed Operational Definition. *Clinical Psychology: Science and Practice*, *11*(3).

Bonanno, G.A. (2004). Loss, Trauma, and Human Resilience: Have We Underestimated the Human Capacity to Thrive After Extremely Aversive Events? *American Psychologist. 59* (1), 20–28.

Brand, C.R. and Egan, V. (1989). The `Big Five' dimensions of personality? Evidence from ipsative, adjectival self-attributions. *Personality and Individual Differences, 110,* 1165-1171.

Bromley, E. (2005). Elements of Dynamics V: Resiliency and the Narrative. *Journal of The American Academy of Psychoanalysis and Dynamic Psychiatry*, *33*(2), 389–404.

Brown, K.W., & Ryan, R.M., (2003). The Benefits of Being Present: Mindfulness and Its Role in Psychological Well-Being. *Journal of Personality and Social Psychology, 84*(4), 822–848.

Brown, K.W., & Ryan, R.M. (2004). Perils and Promise in Defining and Measuring Mindfulness: Observations from Experience. Clinical Psychology: Science and Practice, *11*(3), 242–248.

Centre for Confidence and Well-being (2009). Positive Psychology Resources. Resilience. Retrieved September 2, 2009, from http://www.centreforconfidence.co.uk/pp/overview.php?p=c2lkPTU=

Connor, K.M., & Davidson, J.R.T. (2003). Development of a New Resilience Scale: The Connor-Davidson Resilience Scale (CD-RISC). *Depression and Anxiety, 18*, 76–82.

Csikszentmihalyi, M. (1999). If we are so Rich, Why aren't we Happy? *American Psychologist. 54*(10), 821-827.

Cohn, M.A., Frederickson, B.L., Brown, S.L., Mikels, J.A. & Conway, A.M. (2009). Happiness Unpacked: Positive Emotions Increase Life Satisfaction by Building Resilience. *Emotion, 9*(3), 361–368.

Coutu, D.L. (2002). How Resilience Works. Harvard Business Review, *80*(5), 46-51.

Curtis, W.A., & Cicchett, D. (2003). Moving Research on Resilience into the 21st Century: Theoretical and methodological considerations in examining the biological contributors to resilience. *Development and Psychopahtology, 15*, 773-810.

Davidson, R.J., Kabat-Zinn, J., Schumacher, J., Rosenkranz, M., Muller, D., Santorelli, S.F., Urbanowski, F, Harrington, A., Bonus, K., and Sheridan, J.F. (2003). Alterations in Brain and Immune Function Produced by Mindfulness Meditation. *Psychosomatic Medicine, 65*, 564-570.

Diener, E., Suh, E., & Oishi, S. (1997) Recent Findings on Subjective Well-Being. *Indian Journal of Clinical Psychology*. *24*, 25-41.

Fredrickson, B. L. (2003). Positive emotions and upward spirals in organizational settings. In Cameron, K., Dutton, J. & Quinn, R. (Eds.) *Positive Organizational Scholarship.*

Fredrickson, B.L. (2009). Positivity. New York. Random House, Inc.

Fredrickson, B.L. & Losada, M.F. (2005). Positive Affect and the Complex Dynamics of Human Flourishing. *American Psychologist, 60*, 678-686.

Friborg, O., Barlaug, D., Martinussen, M., Rosenvinge, J.H., & Hjemdal. O. (2005). Resilience in Relation to Personality and Intelligence. *International Journal of Methods in Psychiatric Research*, *14*(1), 29-42.

Gardiner, M., Sexton, R., Durbridge, M. & Garrard, K. (2005). The role of psychological well-being in retaining rural general practitioners. Australian Journal of Rural Health. *13*, 149-55.

Gardiner, M., Sexton, R., Kearns, H. & Marshall, K. (2006). Impact of support initiatives on retaining rural general practitioners. The Australian Journal of Rural Health. *14*(5), 196-201.

Garmezy, N. (1974). The study of competence in children at risk for severe psychopathology. In E. J. Anthony & C. Koupernik (Eds.), The child in his family, 3. Children at Psychiatric Risk, pp 77-98. New York, NY: Wiley.

Garmezy, N. (1983). Stressors of Childhood. In N. Garmezy & M. Rutter (Eds.), *Stress, coping, and development in children*. New York: McGraw-Hill.

Hayes, S.C. & Shenk, C. (2004). Operationalising Mindfulness without Unnecessary Attachments. *Clinical Psychology: Science & Practice, 11*(3), 249-254.

Hays, R. B., Veitch, P. C., Cheers, B., & Crossland, L. (1997). Why doctors leave rural practice. Australian Journal of Rural Health, *5*, 198-203.

Health Workforce Queensland (2006). Sinking deeper into the abyss: a concise overview of current and future trends in the Australian urban, rural and remote general practice workforce. Brisbane: HWQ. 2.2. http://www.healthworkforce.com.au/downloads/publications/1601_arrwag_hwq_gp_trends draft%20_2_.pdf

Health Workforce Resources (2008). Australian Government Report on the Audit of Health Workforce in Rural and Regional Australia.. Australia Department of Health and Ageing.

Henry, J.D., &Crawford, J.R., (2005). The short-form version of the Depression Anxiety Stress Scales (DASS-21): Construct validity and normative data in a large non-clinical sample. *British Journal of Clinical Psychology*, *44*, 227–239.

Hjemdal, O., Friborg, O., Stiles, T.C., Rosenvinge, J.H., & Martinussen, M. (2006). Resilience Predicting Psychiatric Symptoms: A Prospective Study of Protective Factors and their Role in Adjustment to Stressful Life Events. *Clinical Psychology and Psychotherapy. 13*, 194–201.

Holt, J. & Del Mar, C. (2005). Psychological Distress among GPs. Who is at risk and how best to reach them? Australian Family Physician, *34*(7).

Jensen, P.M., Trollope-Kumar, K., Waters, H., Everson, J., (2008). Building Physician Resilience. Canadian Family Physician Journal. Vol. 54(5).

Kelley, T.M. (2005). Natural Resilience and Innate Mental Health**.** *Families, risk, and competence.* Mahwah, NJ: Erlbaum.161–185.

Langer, E.J., & Moldoveanu, M. (2000). The Construct of Mindfulness. *Journal of Social Issues. 56*(1), 1-9.

Lemay, R., & Ghazal, H. (2001). Resilience and Positive Psychology : Finding hope. *Child & Family, 5*(1), 10-21.

Lucas, R. E., Diener, E., & Suh, E. M. (1996). Discriminant Validity of Well-Being Measures. *Journal of Personality and Social Psychology, 71,* 616–628.

Luthar, S.S. (2006). Resilience in Development: A Synthesis of Research across Five Decades. In D. Cicchetti and D.J. Cohen (Eds.), *Developmental Psychopathology. Vol. 3. Risk, Disorder and Adaption*. Hoboken. N.J. John Wiley and Sons, Inc.

Luthar, S.S., & Cicchetti, D. (2000). The Construct of Resilience: Implications for Interventions and Social Policies. Development and Psychopathology, *12*(4).

Lyubomirsky, S., King, L., & Diener, E. (2005). The Benefits of Frequent Positive Affect: Does Happiness Lead to Success*? Psychological Bulletin, 131(6),* 803–855.

McCrae R.R., & Costa P.T. (1987). Validation of the Five-Factor Model of Personality across Instruments and Observers. *Journal of Personality and Social Psychology, 52*: 81-90, 1987.

Massey , S., Cameron, A., Ouellette, S., & Fine, M. (2002). Qualitative Approaches to the Study of Thriving: What Can Be Learned? *Journal of Social Issues*. *54*(2), 337-355.

Masten A.S. (1994). Resilience in individual development: Successful adaptation despite risk and adversity. In Wang, M.C., Gordon, E.W., (Eds.). *Educational resilience in inner-city America: Challenges and prospects.* Hillsdale, NJ. Erlbaum, 3–25.

Masten, A.S., & Reed, M.J. (2002) Resilience in Development. In Snyder, C.R. & Lopez, S.J. (Eds.). Handbook of Positive Psychology. Oxford University Press. New York. 74-76.

Miles, M.B., & Huberman, A.M. (1994). Qualitative Data Analysis. An expanded sourcebook. (2nd ed.). Sage. California.

National Rural General Practice Study. (1997). Monash University Centre for Rural Health, Victoria. Executive Summary and Final Report. http://www.med.monash.edu.au/srh/research/nrgps/

Ong, A.D., Bergeman, C.S., Bisconti, T.L., & Wallace, K.A. (2006). Psychological Resilience, Positive Emotions, and Successful Adaptation to Stress in Later Life. *Journal of Personality and Social Psychology, 91*(4), 730–749.

Rural Health Workforce Australia (2008). *Will more medical places result in more rural GPs?* RHWA, Melbourne. *Web: www.rhwa.org.au*

Rutter, M. (1990). Psychosocial Resilience and Protective Mechanisms. In Rolf, Masten, Cicchetti, Nuechterlein & Weintraub. (Eds.). Protective Factors in the Development of Psychopathology. Cambridge University Press. New York. 181-214.

Ryan, R. M., & Deci, E. L. (2000). Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being. *American Psychologist, 55,* 68–78.

Seligman, M. (1992). Learned optimism: how to change your mind and your life. New York. Pocket Books.

Seligman, M.E.P., & Csikszentmihalyi, M. (2000). Positive Psychology: An Introduction. *American Psychologist, 55*(1), 5-14.

Shapiro, S.L., Carlson, L.E., Astin, J.A., & Freedman, B. (2006). Mechanisms of Mindfulness. *Journal of Clinical Psychology. 62*(3), 373-386.

Silverstein, L.B., Auerbach, C.F. and Levant, R.F. (2005). Using Qualitative Research to Strengthen Clinical Practice. *Professional Psychology: Research and Practice, 37*(4), 351-358.

Sinclair, P. (1992) Organisational Development. Personality Theories, Types and Tests. Retrieved August 7, 2009, from http://www.odportal.com/personality /big-five.htm.

Smith, J.A. (2008). (Ed.). Qualitative Psychology. A Practical Guide to Research Methods. (2nd ed.) Sage. London.

Snyder, C. R., & Lopez, S. (Eds.). (2002). *Handbook of positive psychology*. New York: Oxford University Press.

Snyder, C.R., & Lopez, S.J. (2007). Positive Psychology: The Scientific and Practical Exploration of Human Strengths. Sage. US.

Tedeschi, R.G., & Kilmer, R.P. (2005). Assessing Strengths, Resilience, and Growth to Guide Clinical Interventions. *Professional Psychology: Research and Practice, 36*(3) 230–237.

Tugade, M.M., & Fredrickson, B.L. (2004). Resilient Individuals Use Positive Emotions to Bounce Back from Negative Emotional Experiences. *Journal of Personality and Social Psychology, 86*(2), 320–333.

Ungar, M. (2003). Qualitative Contributions to Resilience Research. *Qualitative Social Work, 2*(1), 85-102.

Urry, H.L., Nitschke, J.B., Dolski, I.., Jackson, D.C., Dalton, K.M., Mueller, C.J., Rosenkranz, M.A., Ryff, C.D., Singer, B.H., & Davidson, R.H. (2004). Making a Life Worth Living: Neural Correlates of Well-Being. *Psychological Science, 15*(6), 367-372.

Vaillant, G. E. (2000). Adaptive Mental Mechanisms: Their role in positive psychology. *American Psychologist, 55,* 89-98.

Weiner, E.L., Swain, G.R., Wolf, B. & Gottlieb, M. (2001). A Qualitative Study of Physicians' Own Wellness-Promotion Practices. Western Journal of Medicine**.** *174*(1): 19–23.

Wengraf. T. (2001). Qualitative Research Interviewing. Sage. London.

Werner, E.E. (2007). What Can we Learn about Resilience from Large-Scale Longitudinal Studies. In Goldstein, S. & Brooks, R.B. Resilience in Children. Springer. US. 91-105.

Werner E.E., Bierman, J.M., & French, F.E. (1971). *The children of Kauai Honolulu.* University of Hawaii.Press. Hawaii:

Wertz, F.J. (2005). Phenomenological Research Methods for Counseling Psychology. Journal of Counseling Psychology, *52* (2), 167-177.

Wrzesniewski, A. (2003). Finding Positive Meaning in Work. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), *Positive organizational scholarship: Foundations of a new discipline:* 296-308. San Francisco: Berrett-Koehler.

Appendix A

Letter to nominated GPs from GP Mentors

8 July 2009

Dr Fname Lname
Practice
Address 1
Address 2

Dear Fname

Re: University of Tasmania Study of Resilience in Rural GPs

University of Tasmania Honours student, Patricia Aitken, will be conducting a study of resilience within Rural General Practitioners. Your name has been put forward as a participant for this study, as you have been identified by several of your GP colleagues, as someone who presents as resilient in their day to day functioning as a rural GP. Approval for this research has been granted by the Tasmanian Ethics Review Committee, Approval Number H10554.

For the purpose of this study 'resilience' is defined as the capacity to respond to adverse conditions in a healthy manner. This study seeks to identify wellness-promotion practices and aspects of psychological wellbeing amongst rural GPs. It is hoped that the knowledge gained from the study may contribute to the recruitment and retention of GPs into the rural setting.

Participation involves a 45-60 minute interview, including completion of three psychological scales. The interview will be conducted at a time and place to meet your availability. All data gathered is de-identified and confidential. Full details of the study are in the attached Participant Information Sheet and Consent Form.

If you agree to participate in the study, please return the consent form to Patricia in the reply-paid envelope provided within the next five days. Patricia will then contact you to set an interview time.

Yours Sincerely

Drs Miranda Hudson, Beris Konetschnik, Patrick O'Sullivan,
Megan Rathbone and Alison Tasker

Enc:

Appendix B

Interview Schedule

Study of Resilience in Rural General Practitioners

Questions for semi-structured Interview

Opening Statement
Thank you for taking the time to participate in this study. The focus of the interview will be on positive outcomes. You will be asked to think about your role as a rural GP and how you cope with the stressors inherent in your role. This conversation is private and you will be given a transcript of this conversation to approve before the information will be used. If you wish to stop the interview at any time, please let me know and we can take a break or discontinue if you wish. Do you have any questions before we begin?

Opening Question
Your name has been put forward as a participant for this study, as you have been identified by a number of the GP Mentors who know you, as someone who presents as resilient in their day to day functioning as a rural GP. For the purpose of this study resilience is defined as the capacity to respond to adverse conditions in a healthy manner.

1 Why do you think your colleagues have perceived you as resilient?

2 What do you think about that perception?

3 Do you think that your role requires you to be resilient? and if so, how?

4 Can you recall a significant life challenge - what did you do?

5 With regard to work/life balance - what do you do?

6 How do you clear your head / maintain equanimity?

7 In response to cues obtained from answers to the above, open ended questions will be used as following:
What was it about that time?
What was it you did then?
What was it you felt?
Who was there?
How did you cope with that?
What behaviours did you use?
How did you respond to that situation?
How do you maintain that?

8 Is there anything else you would like to add?

Do you have any questions before we conclude the interview?

Could you please now complete these 3 self-report questionnaires as explained in the information sheet.

I will be forwarding you a copy of your full transcript for your approval in the next week.

Thank you for your valuable time and interest in the study.

Appendix C

Information Sheet

PARTICIPANT INFORMATION SHEET
SOCIAL SCIENCE/ HUMANITITES
RESEARCH

THE STUDY OF RESILIENCE WITHIN RURAL GENERAL PRACTITIONERS

Invitation
You are invited to participate in a research study into the nature of psychological resilience within the General Practice community in the North West of Tasmania. The study is being conducted by Patricia Aitken, Honours Student, and Dr Ali Maginness, Clinical Lecturer in Psychology with the Rural Clinical School, University of Tasmania.

1. 'What is the purpose of this study?'
The purpose of this study is to investigate how General Practitioners, who have been identified as resilient, respond to current stressors facing rural General Practice and to identify what factors might contribute to the development of resilience. It is part of a wider project exploring the nature of resilience across different groups of people.

2. 'Why have I been invited to participate in this study?'
You have been invited to join this study as you have been identified by your peers and colleagues as someone who presents as resilient in their day to day functioning.

3. 'What does this study involve?'
Being part of study will involve participating in an interview with the researcher, and discussing what you perceive to be the current stressors facing General Practitioners in rural North West Tasmania, and what you do to manage these stressors. This interview will be voice recorded, and it is expected that the interview will last approximately 45-60 minutes. Following the interview you will be asked to complete 3 short questionnaires assessing health and well being.

It is important that you understand that your involvement is this study is voluntary. While we would be pleased to have you participate, we respect your right to decline. There will be no consequences to you if you decide not to participate. If you decide to discontinue participation at any time, you may do so without providing an explanation. All information will be treated in a confidential manner, and your name will not be used in any publication arising out of the research. All of the research will be kept in a locked cabinet in the office of the Rural Clinical School in Burnie.

4. Are there any possible benefits from participation in this study?
Participants in a previous study similar to this one, commented that the interview was validating of their ability to cope with stressors, and that it was a positive experience.

If we are able to take the findings of this small study and link them with a wider study, the result may provide valuable information for others and it may lead to increased understanding as to the nature of resilience. This information could then be used to enhance the resilience and well-being of others. Also, importantly, the

knowledge gained may be useful in informing general practice employment and training agencies regarding models of support and education for GPs.

5. Are there any possible risks from participation in this study?
There are no specific risks anticipated with participation in this study. However, if you find that the interview brings up distressing thoughts or emotions you will be provided with contact details of the researcher and a psychological service available to General Practitioners in the North West. This will not incur any cost to you.

6. What if I have questions about this research?
If you would like to discuss any aspect of this study please feel free to contact Patricia Aitken (6437 0950 or 0438 370 951) or Dr Ali Maginness (6430 4585) and they will be able to discuss the project with you. Once we have analysed the information we will be mailing / emailing you a summary of our findings. You are welcome to contact us at that time to discuss any issue relating to the research study.

This study has been approved by the Tasmanian Social Science Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study you should contact the Executive Officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. You will need to quote Ethics Reference No. H10554.

Thank you for taking the time to consider this study.

If you wish to take part, please sign the attached consent form and return it in the enclosed reply-paid envelope. Patricia will then contact you to make a time for interview.

This information sheet is for you to keep.

Appendix D

Consent Form

CONSENT FORM
Title of Project: The Study of Resilience within Rural General Practitioners

1. I have read and understood the 'Information Sheet' for this project.
2. The nature and possible effects of the study have been explained to me.
3. I understand that the study involves participating in a recorded interview and completing 3 self-report questionnaires.
4. I understand that participation involves the risk that the information discussed during the interview may elicit distressing thoughts and / or emotions, and that support will be provided if need be.
5. I understand that all research data will be securely stored on the University of Tasmania premises for five years [or at least five years], and will then be destroyed.
6. Any questions that I have asked have been answered to my satisfaction.
7. I agree that research data gathered from me for the study may be published provided that I cannot be identified as a participant.
8. I understand that the researchers will maintain my identity confidential and that any information I supply to the researcher(s) will be used only for the purposes of the research.
9. I agree to participate in this investigation and give permission for Patricia Aitken from the University of Tasmania to contact me.
10. I understand that I may withdraw at any time without any effect, and if I so wish, may request that any data I have supplied to date, be withdrawn from the research.

Name of Participant	
Phone number	
Signature	
Date	

Statement by Investigator

☐ I have explained the project & the implications of participation in it to this volunteer and I believe that the consent is informed and that he/she understands the implications of participation

If the Investigator has not had an opportunity to talk to participants prior to them participating, the following must be ticked.

☐ The participant has received the Information Sheet where my details have been provided so participants have the opportunity to contact me prior to consenting to participate in this project.

Name of Investigator/s — Patricia Aitken - Researcher Ph: 03 6437 0950 or 0438 370 951
Dr Ali Maginness - 03 6430 4585

Signature of Investigator

Date

Appendix E

Ethics Approval Letter

Appendix F

Psychological Scales

1 The Connors Davidson Resilience Scale, self-report Psychological measure of Resilience

2 Depression Anxiety and Stress Scale, self report Psychological measure

3 Five Facet Mindfulness Questionnaire, self-report Psychological measure

CDRS

Please circle the answer that is most descriptive of you.	**Not true at all**	**Rarely true**	**Sometimes true**	**Often true**	**True nearly all of the time**
Able to adapt to change	0	1	2	3	4
Close and secure relationships	0	1	2	3	4
Sometimes fate and God can help	0	1	2	3	4
Can deal with whatever comes	0	1	2	3	4
Past success gives confidence for a new challenge	0	1	2	3	4
See the humorous side of things	0	1	2	3	4
Coping with stress strengthens	0	1	2	3	4
Tend to bounce back after illness or hardship	0	1	2	3	4
Things happen for a reason	0	1	2	3	4
Best effort no matter what	0	1	2	3	4
You can achieve your goals	0	1	2	3	4
When things look hopeless, I don't give up	0	1	2	3	4
Know where to turn for help	0	1	2	3	4
Under pressure, focus and think clearly	0	1	2	3	4
Prefer to take the lead in problem solving	0	1	2	3	4
Not easy discouraged by failure	0	1	2	3	4
Think of self as a stronger person	0	1	2	3	4
Make unpopular or difficult decisions	0	1	2	3	4
Can handle unpleasant feelings	0	1	2	3	4
Have to act on a hunch	0	1	2	3	4
Strong sense of purpose	0	1	2	3	4
In control of your life	0	1	2	3	4
I like challenges	0	1	2	3	4
You work to attain your goals	0	1	2	3	4
Pride in your achievements	0	1	2	3	4

DASS

Name: *Date:*

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you *over the past week*. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me to a considerable degree, or a good part of time
3 Applied to me very much, or most of the time

1	I found myself getting upset by quite trivial things	0	1	2	3
2	I was aware of dryness of my mouth	0	1	2	3
3	I couldn't seem to experience any positive feeling at all	0	1	2	3
4	I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5	I just couldn't seem to get going	0	1	2	3
6	I tended to over-react to situations	0	1	2	3
7	I had a feeling of shakiness (eg, legs going to give way)	0	1	2	3
8	I found it difficult to relax	0	1	2	3
9	I found myself in situations that made me so anxious I was most relieved when they ended	0	1	2	3
10	I felt that I had nothing to look forward to	0	1	2	3
11	I found myself getting upset rather easily	0	1	2	3
12	I felt that I was using a lot of nervous energy	0	1	2	3
13	I felt sad and depressed	0	1	2	3
14	I found myself getting impatient when I was delayed in any way (eg, lifts, traffic lights, being kept waiting)	0	1	2	3
15	I had a feeling of faintness	0	1	2	3
16	I felt that I had lost interest in just about everything	0	1	2	3
17	I felt I wasn't worth much as a person	0	1	2	3
18	I felt that I was rather touchy	0	1	2	3
19	I perspired noticeably (eg, hands sweaty) in the absence of high temperatures or physical exertion	0	1	2	3
20	I felt scared without any good reason	0	1	2	3
21	I felt that life wasn't worthwhile	0	1	2	3

Subject number _____ **Date _____**

5-FACET M QUESTIONNAIRE

Please rate each of the following statements using the scale provided. Write the number in the blank that best describes <u>your own opinion</u> of what is <u>generally true for you</u>.

1	2	3	4	5
never or very rarely true	**rarely true**	**sometimes true**	**often true**	**very often or always true**

_____ 1. When I'm walking, I deliberately notice the sensations of my body moving.

_____ 2. I'm good at finding words to describe my feelings.

_____ 3. I criticize myself for having irrational or inappropriate emotions.

_____ 4. I perceive my feelings and emotions without having to react to them.

_____ 5. When I do things, my mind wanders off and I'm easily distracted.

_____ 6. When I take a shower or bath, I stay alert to the sensations of water on my body.

_____ 7. I can easily put my beliefs, opinions, and expectations into words.

_____ 8. I don't pay attention to what I'm doing because I'm daydreaming, worrying, or otherwise distracted.

_____ 9. I watch my feelings without getting lost in them.

_____ 10. I tell myself I shouldn't be feeling the way I'm feeling.

_____ 11. I notice how foods and drinks affect my thoughts, bodily sensations, and emotions.

_____ 12. It's hard for me to find the words to describe what I'm thinking.

_____ 13. I am easily distracted.

_____ 14. I believe some of my thoughts are abnormal or bad and I shouldn't think that way.

_____ 15. I pay attention to sensations, such as the wind in my hair or sun on my face.

_____ 16. I have trouble thinking of the right words to express how I feel about things

_____ 17. I make judgments about whether my thoughts are good or bad.

_____ 18. I find it difficult to stay focused on what's happening in the present.

1	2	3	4	5
never or very rarely true	**rarely true**	**sometimes true**	**often true**	**very often or always true**

_____ 19. When I have distressing thoughts or images, I "step back" and am aware of the thought or image without getting taken over by it.

_____ 20. I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing.

_____ 21. In difficult situations, I can pause without immediately reacting.

_____ 22. When I have a sensation in my body, it's difficult for me to describe it because I can't find the right words.

_____ 23. It seems I am "running on automatic" without much awareness of what I'm doing.

_____24. When I have distressing thoughts or images, I feel calm soon after.

_____ 25. I tell myself that I shouldn't be thinking the way I'm thinking.

_____ 26. I notice the smells and aromas of things.

_____ 27. Even when I'm feeling terribly upset, I can find a way to put it into words.

_____ 28. I rush through activities without being really attentive to them.

_____ 29. When I have distressing thoughts or images I am able just to notice them without reacting.

_____ 30. I think some of my emotions are bad or inappropriate and I shouldn't feel them.

_____ 31. I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow.

_____ 32. My natural tendency is to put my experiences into words.

_____ 33. When I have distressing thoughts or images, I just notice them and let them go.

_____ 34. I do jobs or tasks automatically without being aware of what I'm doing.

_____ 35. When I have distressing thoughts or images, I judge myself as good or bad, depending on what the thought/image is about.

_____ 36. I pay attention to how my emotions affect my thoughts and behavior.

_____ 37. I can usually describe how I feel at the moment in considerable detail.

_____ 38. I find myself doing things without paying attention.

_____ 39. I disapprove of myself when I have irrational ideas.

Appendix G

General Practice North West - Letter of Support

Appendix H

NVivo Analysis Themes (22)

Beliefs	**Behaviour**	**Affect**	**Connectedness**
Belief System	Humility	Mindful	Family Support
Balancing	Gratitude	Self-awareness	Social groups
Eudaimonia	Self-efficacy	Equanimity	Community
	Self-adapting	Humour	
	Pragmatism	Positive-effect	
	Self-direction	Optimism	
	Self-care strategies	Flow	
		Empathy	
		Subjective well-being	

Appendix I

Matrix of Themes - dominant, consistent and intermittent

	Participant	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
	Beliefs										
1	Belief Systems	C	C	C	C	D	C	D	D	C	D
2	Balance	C	D	C	C	C	C	C	C	C	D
3	Eudaimonia	C	C	I	I	I	I	I	I	I	C
	Behaviour										
4	Humility	I	I	I	I	I	I	I	I	I	I
5	Gratitude	C	C	I	C	C	C	I	I	I	I
6	Positive coping	C	C	C	D	D	D	D	D	D	D
7	Pragmatism	C	I	C	C	C	C	C	D	I	C
8	Self-Efficacy	D	D	D	D	D	D	D	D	D	D
9	Self-Direction	D	D	D	D	D	D	D	D	D	D
10	Self Care Strategies	D	D	D	D	D	D	D	D	D	D
	Affect										
11	Mindfulness	I	I	I	I	C	I	I	I	I	I
12	Self-Awareness	C	D	C	D	D	D	D	D	C	D
13	Flow	I	I	-	-	I	I	I	I	I	-
14	Equanimity	C	I	C	D	I	C	C	D	D	C
15	Subjective Well-Being	D	D	D	D	C	C	D	C	C	D
16	Positive Affect	D	D	D	D	D	D	D	D	D	D
17	Empathy	C	I	C	C	C	C	C	C	C	C
18	Optimism	C	D	I	C	C	C	C	C	I	I
19	Humour	I	I	C	C	C	I	C	I	I	I
	Relationships										
20	Support	D	D	D	D	C	D	D	D	D	D
21	Social Connectedness	I	D	D	I	C	C	C	D	D	I
22	Community	I	D	C	I	C	I	C	D	C	I

Appendix J

Tables of Participant Quotes by Psychological Structure